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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/923,001

08/03/2001

Saed Younis

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12/28/2004

Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
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EXAMINER

WANG, TED M

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/923,001	YOUNIS, SAED	
	Examiner	Art Unit	
	Ted M Wang	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/02/02</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because
  - On Fig.5 step 503 line 2, insert – AND – before “THE”.
  - On Fig.6, change all elements “5xx” to – 6xx --.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:
  - On page 13 lines 28-29, change “602” to -- 604 --.
  - On page 14 line 1, change “602” to -- 604 – after “simulator”.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 1,15, and 16 are objected to because of the following informalities:
  - With regard claim 1 line 8, insert – and – between “signal” and “the”.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8-12 recite the limitation "the digitized converter" in claim 8 that has not been introduced previously. There is insufficient antecedent basis for this limitation in the claim.
6. Claims 17-19 recite the limitation "the air time" in claim 17 (c) that has not been defined clearly to distinguish it from the limitation "the transmission time" as recited in claim 17 (d). The phrase "the air time" as recited is indefinite.
7. Regarding claim 22, the phrase "an antenna/converter" renders the claim indefinite because it is unclear whether "an antenna/converter" is referred to an antenna delay or converter delay, or a delay between the transmitter antenna and the receiver converter, or a delay between the receiver antenna and receiver converter.

***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3, 7, 13-16, 20, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Dean (US 6,201,802).
  - With regard claim 1, Chung et al. discloses a method for determining the relative timing of a pilot signal transmitted by a base station with respect to a timing reference signal, comprising:
    - a) generating a reference CDMA pilot signal on the same carrier frequency on which the pilot signal is generated by the base station (Fig.1 element 34, column 3 lines 38-43) the reference CDMA pilot signal having a known timing

relationship to the timing reference signal (Fig.1 element 20 and column lines 23-43);

b) locking the frequency of the reference CDMA pilot signal and the timing reference signal to a common frequency reference (Fig.1 elements 20 and 30 and column 3 lines 23-38);

c) combining the reference CDMA pilot signal the pilot signal generated by the base station (Fig.1 element 10, Fig.3 element 100, 152, and 154, and column 8 lines 6-35).

d) determining the time offset between the reference CDMA pilot signal and the pilot signal generated by the base station (Fig.3 elements 112 and 158 and column 8 lines 6-56).

- With regard claim 2, Dean further discloses that the timing difference between the reference CDMA pilot signal and the pilot signal generated by the base station is determined using a mobile device having a pilot searcher (column 8 lines 24-47).
- With regard claim 3, Dean further discloses that the reference CDMA pilot signal is generated by a base station simulator (column 8 lines 6-23).
- With regard claim 7, Dean further discloses that the combining of the reference CDMA pilot signal and the pilot signal generated by the base station is an RF combining (Fig.3 element 152 and column 8 lines 6-35).

- With regard claim 13, which is a data logger claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 14, which is a data logger claim related to claim 4, all limitation is contained in claim 4. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 15, which is a data logger claim related to claim 13, all limitation is contained in claim 13. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 16, which is a data logger claim related to claim 14, all limitation is contained in claim 14. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 20, which is an apparatus claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 21, Dean further discloses that the device capable of determining the time offset is a CDMA mobile station (column 5 lines 53-67).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject

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matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean (US 6,201,802) in view of Chung et al. (US 6,421,330).

- With regard claim 4, Dean discloses all of the subject matter as described in the above paragraph except for specifically teaching that the timing reference signal is a signal indicating the GPS time clock 1 PPS tick.

However, Chung et al. teaches the timing reference signal is a signal indicating the GPS time clock 1 PPS tick (Fig.5 step S1, Fig.7 step S1', column 5 lines 50-58, column 7 lines 3-11, and column 9 lines 6-13).

It is desirable that the timing reference signal is a signal indicating the GPS time clock 1 PPS tick in order to improve the accuracy of the bi-directional propagation delay time determination (column 2 lines 48-67). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the method as taught by Chung et al. in which, the timing reference signal is a signal indicating the GPS time clock 1 PPS tick, into Dean's processing unit (Fig.3 elements 120 and 150) so as to improve the accuracy of the bi-directional propagation delay time determination.

- With regard claim 5, Dean discloses all of the subject matter as described in the above paragraph except for specifically teaching that common frequency reference is a 10 MHz output from a GPS receiver.

However, Chung et al. teaches that common frequency reference is a 10 MHz output from a GPS receiver (Fig.5 step S1, Fig.7 step S1', column 5 lines 50-58, column 7 lines 3-11, and column 9 lines 6-13).

It is desirable that common frequency reference is a 10 MHz output from a GPS receiver in order to improve the synchronization between the pilot signal and the GPS (column 2 lines 48-67). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the method as taught by Chung et al. in which, common frequency reference is a 10 MHz output from a GPS receiver, into Dean's processing unit (Fig.3 elements 120 and 150) so as to improve the synchronization between the pilot signal and the GPS.

- With regard claim 6, Chung et al. further discloses that timing reference signal is generated by the GPS receiver (Fig.1 and Fig.6 element 100, column 5 lines 50-58, column 7 lines 3-11, and column 9 lines 6-13).

### ***Conclusion***

11. Reference US 6,188,354 is cited because they are put pertinent to the determining the location of a remote station in a CDMA communication network. However, none of references teach detailed connection as recited in claim.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..




If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Ted M Wang  
Examiner  
Art Unit 2634

Ted M. Wang



SHUWANG LIU  
PRIMARY EXAMINER